

Attorney Docket No. P65678US0  
Serial No. 09/582,328

Amendments to the claims:

This listing of claims replaces all prior versions, and listings, of claims in the application.

Listing of claims:

Claims 1-40 (canceled).

41 (previously presented): A purified, synthesized, or genetically engineered serine protease inhibitor, characterized by having a domain with four cysteines, and a sequence of 13 amino acids is present between the first and second cysteines, a sequence of 18 amino acids is present between the second and third cysteines, and a sequence of 2 amino acids is present between the third and fourth cysteines.

42 (previously presented): The serine protease inhibitor according to claim 41, characterized in that the sequence of the domain between the first and second cysteines is selected from  
HEFQAFMKNGKLF (SEQ ID NO: 7), SEYRKSRKNGRLF (SEQ ID NO: 8),  
DDFKKKGERDGDFI (SEQ ID NO: 9), SEFRDQVRNGTLI (SEQ ID NO: 10),  
SAFRPFVRNGRLG (SEQ ID NO: 11), SEYRHYVRNGRLP (SEQ ID NO: 12),  
KEYEKQVRNGRLF (SEQ ID NO: 13), DEFRRLLQNGKLF (SEQ ID NO: 14),

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SQYQNQAKNGILF (SEQ ID NO: 15), AEYREQMKNGRLS (SEQ ID NO: 16), or  
NEYRKLVRNGKLA (SEQ ID NO: 17), DEFRSQMKNGKLI (SEQ ID NO: 18).

43 (previously presented): The serine protease inhibitor according to claim 41, characterized in that the sequence between the second and third cysteines is selected from PQDKKFFQSLDGIMFINK (SEQ ID NO: 19), TRENDPIQGPDGKMHGNT (SEQ ID NO: 20, TRENDPVLGPDGKTHGNK (SEQ ID NO: 21), TREHNPVRGPDGKMHGNT (SEQ ID NO: 22), TRESDPVRGPDGKMHGNT (SEQ ID NO: 23), TRENDPIEGLDGKIHGNT (SEQ ID NO: 24), TRENDPIRGPDGKMHGNL (SEQ ID NO: 25), TRENDPVRGPDGKTHGNK (SEQ ID NO: 26), TRENDPIQGPDGKVHGNT (SEQ ID NO: 27), TRESDPVRDADGKSYNNQ (SEQ ID NO: 28), or TRESDPVRGPDGKTHGNK (SEQ ID NO: 29).

44 (previously presented): The serine protease inhibitor according to claim 41, characterized in that the sequence between the third and fourth cysteines of the domain is selected from AT, AL, AM, SM, or TM.

45 (previously presented): The serine protease inhibitor according to claim 41, having one of the following formulas:

- R<sub>1</sub>-C-HEFQAFMKNGKLF-C-PQDKKFFQSLDGIMFINK-C-AT-C-R<sub>2</sub> (SEQ ID NO: 30)
- R<sub>1</sub>-C-DDFKKGERDGDFI-C-PDYYEAVCGTDGKTYDNR-C-AL-C-R<sub>2</sub> (SEQ ID NO: 31)
- R<sub>1</sub>-C-SAFRPFVRNGRLG-C-TRENDPVLGPDGKTHGNK-C-AM-C-R<sub>2</sub> (SEQ ID NO: 32)

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- R<sub>1</sub>-C-KEYEKQVRNGRLF-C-TRESDPVRGPDRGMHGNK-C-AL-C-R<sub>2</sub> (SEQ ID NO: 33)
- R<sub>1</sub>-C-SQYQNQAKNGILF-C-TRENDPIRGPDGKMHGNL-C-SM-C-R<sub>2</sub> (SEQ ID NO: 34)
- R<sub>1</sub>-C-NEYRKLVRNGKLA-C-TRENDPIQGPDGKVHGNT-C-SM-C-R<sub>2</sub> (SEQ ID NO: 35)
- R<sub>1</sub>-C-SEYRKSRKNGRLF-C-TRENDPIQGPDGKMHGNT-C-SM-C-R<sub>2</sub> (SEQ ID NO: 36)
- R<sub>1</sub>-C-SEFRDQVRNGTLI-C-TREHNPVRGPDRGMHGNK-C-AM-C-R<sub>2</sub> (SEQ ID NO: 37)
- R<sub>1</sub>-C-SEYRHYVRNGRLP-C-TRENDPIEGLDGKIHGNT-C-SM-C-R<sub>2</sub> (SEQ ID NO: 38)
- R<sub>1</sub>-C-DEFRRLLQNGKLF-C-TRENDPVRGPDRGMHGNK-C-AM-C-R<sub>2</sub> (SEQ ID NO: 39)
- R<sub>1</sub>-C-AEYREQMKNGRLS-C-TRESDPVRDADGKSYNNQ-C-TM-C-R<sub>2</sub> (SEQ ID NO: 40)
- R<sub>1</sub>-C-DEFRSQMKNGKLI-C-TRESDPVRGPDRGMHGNK-C-TM-C-R<sub>2</sub> (SEQ ID NO: 41),  
wherein R<sub>1</sub> is NH<sub>2</sub>, an amino acid, or a peptide with up to 1000 amino acids, and R<sub>2</sub> is COOH,  
CONH<sub>2</sub>, an amino acid, or a peptide with up to 1000 amino acids.

46 (previously presented): The serine protease inhibitor according to claim 41, characterized by containing

- a disulfide bridge between the first and fourth cysteines and/or between the second and third cysteines; or
- a disulfide bridge between the first and a fifth cysteine and/or between the second and fourth cysteines and/or between the third and a sixth cysteine.

47 (previously presented): The serine protease inhibitor according to claim 41, characterized by being a fragment of VAKTI-1 (SEQ. ID. NO. 1) or VAKTI-2 (SEQ. ID. NO. 2).

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Claim 48 (previously presented): A purified, synthesized, or genetically engineered serine protease inhibitor, characterized by being HF 6479 (SEQ. ID. NO. 3) or HF 7665 (SEQ. ID. NO. 4).

Claim 49 (cancelled).

Claim 50 (currently amended): A medicament containing

- the serine protease inhibitor according to claim 48
- together with a pharmaceutical vehicle.

Claim 51 (previously presented): The medicament according to claim 50, containing from 0.01 to 1000 mg per kg of body weight of the serine protease inhibitor.

Claim 52 (previously presented): Method of using the medicament according to claim 50, wherein the medicament is the serine protease inhibitor, for the treatment of acute or chronic cervix inflammations, inflammations of Bartholin's glands and other vaginal regions, tonsilitis, pharyngitis and laryngitis, acute or chronic inflammatory processes accompanied by excessive formation of mucus and the resulting acute emergency

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situations, postoperative bleeding due to hyperfibrinolysis, and for the prophylaxis of lung emphysema formation in deficiencies of  $\alpha_1$ -proteinase inhibitor.

Claims 53-60 (cancelled).